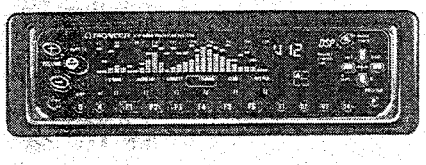
PIONEER
The Art of Entertainment

Service Manual

● DEQ-9200/UC



ORDER NO.
CRT1691

DSP AUDIO PROCESSOR

DEQ-9200 UC,EW

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● Service Precaution

1. This device employs an inverter as the power supply for the EL. The inverter has an output voltage reach approximately 300 Vrms (AC), under no-load condition and about 160 Vrms (AC), with the EL connected. Utmost cars should be used not to suffer from a possible electric shock, accordingly.

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

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K-FFA. MAY 1995 Printed in Japan

1. DISASSEMBLY

● Removing the Case

1. Remove the four screws.
2. Raise the case to remove.

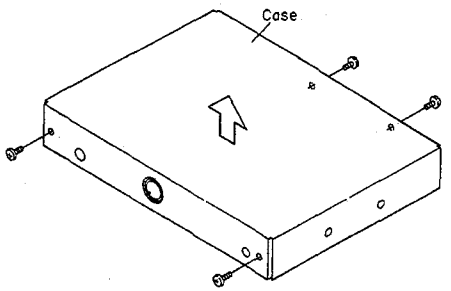


Fig.1

● Removing the Audio Unit

1. Remove the two screws.
2. Unbend the tabs at four locations indicated by arrows until straight.
3. Raise up on audio unit to remove it from chassis.

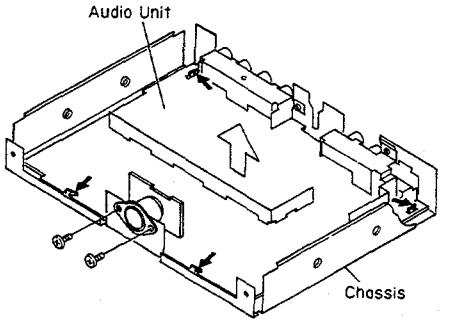


Fig.2

● Removing the Detach Grille Assy and Cover

1. Press the detach button and then remove the detach grille assy.
2. Remove the five screws.
3. Remove the cover.

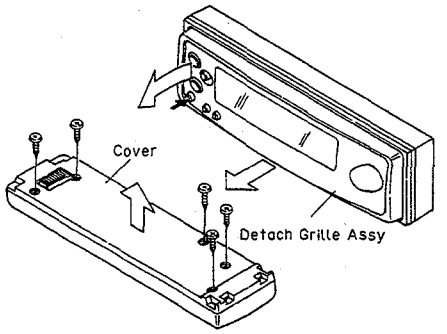


Fig.3

● Removing the Holder and Panel Unit

1. Remove the four screws.
2. Remove the holder.
3. Remove the four screws.
4. Remove the panel unit.

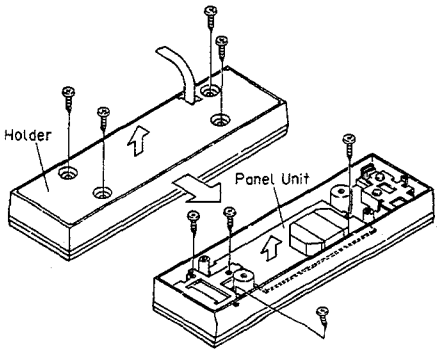
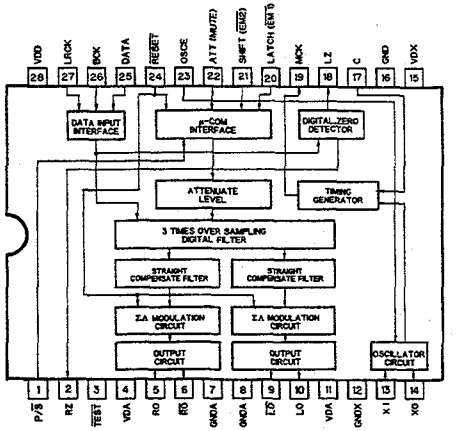


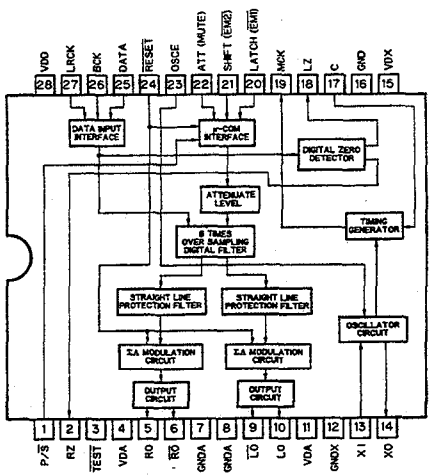
Fig.4

● ICs

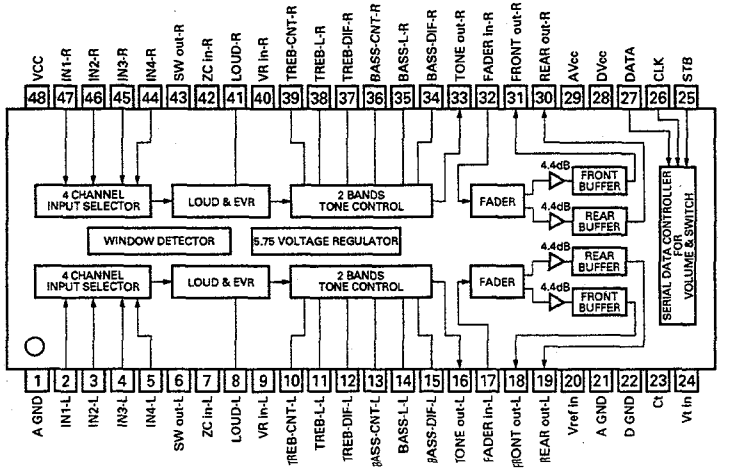
PD2029AM



PD2026BML



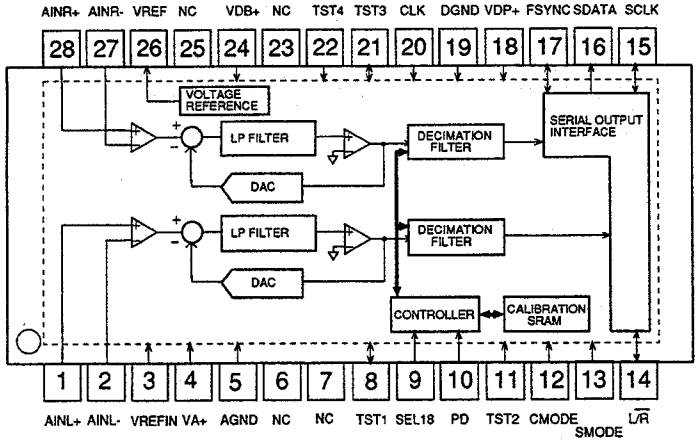
SN761025DL



● Pin Functions (AK5340-VS)

Pin No.	Pin Name	I/O	Function and Operation
1	L+	I	Lch analog non-inverting input
2	L-	I	Lch analog inverting input
3	VREFIN	I	Reference voltage input
4	VADD		Power supply(+5V) for analog circuit
5	AGND		GND for analog circuit
6-9	NC		Not used
10	DPD	I	Power down pin
11	GND		GND
12	NC	I	Master clock select
13	GND		GND
14	L/R	I/O	Input channel select
15	SCLK	I/O	Serial data clock
16	SDATA	O	Serial data output
17	FSYNC	I/O	Frame synchronize clock
18	DVDD		Power supply(+5V) for digital circuit
19	DGND		GND for digital circuit
20	CLK	I	Master clock input
21,22	NC		Not used
23	GND		GND
24	VDB+		Power supply(+5V) for digital circuit
25	NC		Not used
26	VREF	O	Reference voltage output
27	R-	I	Rch analog inverting input
28	R+	I	Rch analog non-inverting input

AK5340-VS

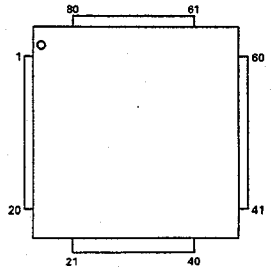

AINR+ AINR- VREF NC VDB+ NC TST4 TST3 CLK DGND VDP+ FSYNC SDATA SCLK
28 27 26 25 24 23 22 21 20 19 18 17 16 15
VOLTAGE REFERENCE
LP FILTER
DECIMATION FILTER
SERIAL OUTPUT INTERFACE
DAC
LP FILTER
DECIMATION FILTER
DAC
CONTROLLER
CALIBRATION SRAM
1 2 3 4 5 6 7 8 9 10 11 12 13 14
AINL+ AINL- VREFIN VA+ AGND NC NC TST1 SEL18 PD TST2 CMODE SMODE L/R

● Pin Functions (PD5313B)

Pin No.	Pin Name	I/O	Output Format	Function and Operation
1	$\overline{DSPACK}$	I		DSP-IC ready input
2	DPD	O	C	DSP-IC calibration setting
3, 4	$\overline{DSPCS2, 1}$	O	C	DSP-IC enable output 2, 1
5	DSPCD	O	C	DSP-IC address output
6	DSPRST	O	C	DSP-IC reset output
7	DSPCK	O	C	DSP-IC clock output
8	DSPOUT	O	C	DSP-IC data output
9	DSPIN	I		DSP-IC data input
10	MICSEN	I		Microphone sense
11	ADSEL	O	C	Microphone / audio switching
12	POSL	I		Position right / left detection
13	PEE	O	C	PEE sound output
14	SWVDD	O	C	VDD
15	US	I		US destination detection input
16	MODE	I		Mode detection
17	TESTIN	I		Test input
18	TESN	I		Test enable input
19	TSCK	O	C	Test clock output
20	DPDT/TSO	O	C	Display / test data output
21	KYDT/TSIN	I		Key / test data input
22	$\overline{DSENS}$	I		Detaching sense
23	$\overline{BSENS}$	I		Backup sense
24	$\overline{SYSB}$	I		System remote
25	$\overline{RESET}$			Reset
26	MODESW	I		Manual / multi switching
27	$\overline{ADSEL}$	O	C	Microphone / audio switching
28	Xin	I		Crystal oscillating element connection pin
29	Xout	O		Crystal oscillating element connection pin
30	Vss			GND
31-39	NC	O	C	Not used
40	ILM	O	C	Illumination output
41-62	NC	O	C	Not used
63	J			DISCO / CLUB setting
64-70	NC	O	C	Not used
71	Vcc			Back up 5V
72	Vref			VCC connection
73	AVss			A / D GND
74	$\overline{CLIP}$	I		Clip sense
75	$\overline{MUTE}$	O	C	Mute output
76	SYSPW	O	C	System power
77	VST	O	C	EVOL-IC strobe output
78	VDT	O	C	EVOL-IC data output
79, 80	VCK2, 1	O	C	EVOL-IC clock output 2, 1

Output Format	Meaning
C	CMOS

*PD5313B

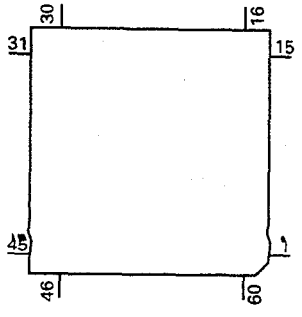


IC's marked by are MOS type.*
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

● **Pin Functions (PD2038C)**

Pin No.	Pin Name	I/O	Function and Operation
1–3	NC		Not Used
4	VDD		Power supply terminal for logic circuit
5	VSS		GND
6–11	TP5-0	O	Test data output
12	VSSR		GND terminal for internal delay RAM
13	VDDR		Power supply terminal for internal delay RAM
14	VSS		GND
15–17	SDO2-0	O	Serial data output
18,19	SDI1,0	I	Serial data input 1, 0 (1fs)
20	LR	I	LR clock input (2fs)
21	WCK	O	Word clock output
22	FS32	O	Bit clock output (32fs)
23	FS64	O	Bit clock output (64fs)
24	EBC0	I	Bit clock input
25,26	EBCI1,0	I	Bit clock input 1, 0
27	ELR0	I	LR clock input
28,29	ELRI1,0	I	LR clock input 1, 0
30	SYNC	I	Synchronizing signal input
31	VDD		Power supply terminal for logic circuit
32	XI	I	Crystal oscillating element connection pin or external clock input
33	XO	O	Crystal oscillating element connection pin
34	VSS		GND
35	CKSL	I	System clock select input
36	PLOFF	I	Crystal oscillation mode or VCO oscillation mode select input
37	PD	O	Data output from phase comparator
38	VSSA		Analog GND
39	AMPO	O	Low pass filter amplifier output
40	AMPI	I	Low pass filter amplifier input
41	VDDA		Analog power supply
42–44	TES0-2	I	Test terminal
45	$\overline{RST}$	I	Reset signal input terminal
46	$\overline{CS}$	I	Chip select input
47	IFCD	I	Command or data select input from DSP controller
48	IFDI	I	Data input from DSP controller
49	IFDO	O	Data output for DSP controller
50	IFCK	I	Shift clock input from DSP controller
51	$\overline{ACK}$	O	Acknowledge signal output for DSP controller
52	VSS		GND
53–60	TP16-9	O	Test data output

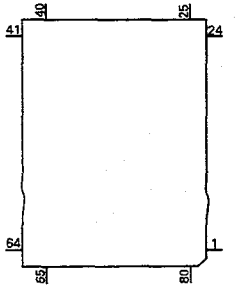
*PD2038C



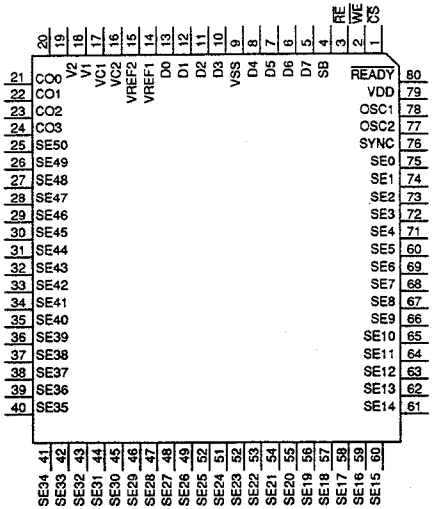
● **Pin Functions (TC9331F)**

Pin No.	Pin Name	I/O	Function and Operation
1	PEN	I	Parity check enable terminal
2	SYNC	I	Synchronous signal input terminal
3, 4	ELRI0, 1	I	Inputs the LR clock for SDI0, 1 data
5-7	ELRO0-2	I	Inputs the LR clock for SDO0-2 data
8, 9	EBCI0, 1	I	Inputs the shift clock for SDI0, 1 data
10-12	ELCO0-2	I	Inputs the shift clock for SDO0-2 data
13	Vss		GND
14	LR	O	LR clock output terminal (1 fs)
15	WCK	O	Word clock output terminal (2 fs)
16	BCK0	O	Bit clock output terminal (32 fs)
17	BCK1	O	Bit clock output terminal (64 fs)
18, 19	SDI0, 1	I	Serial data input terminal 0, 1
20, 21	SDO0, 1	O	Serial data output terminal 0, 1
22	SDO2	O	Serial data output terminal Outputs 16-bit data
23	VDD		Power terminal
24-31	A15-8	O	External RAM address output terminal
32	Vss		GND
33-40	A7-0	O	External RAM address output terminal
41	Vss		GND
42-49	IO0-7	I/O	External RAM data input / output terminal
50	VDD		Power terminal
51	Vss		GND
52-59	IO8-15	I/O	External RAM data input / output terminal
60	Vss		GND
61	RC0	O	$\overline{RAS}$:Row address strobe output terminal
62	RC1	O	$\overline{CAS}$:Column address strobe output terminal
63	RC2	O	$\overline{OE}$:Output enable signal output terminal
64	RC3	O	$\overline{WTITE}$:Read / write signal output terminal
65	$\overline{RST}$	I	Reset signal input terminal
66	$\overline{HALT}$	I	Halt signal input terminal
67	$\overline{OVF}$	O	Overflow output terminal
68	$\overline{CS}$	I	Chip select signal input terminal
69	IFCD	I	Input mode selection terminal for a command or data from the microprocessor
70	IFCK	I	Shift clock input terminal for microprocessor data
71	IFDT	I	Microprocessor data input terminal
72	$\overline{ACK}$	O	Acknowledgement output terminal for the microprocessor
73	DCHK	O	Microprocessor data return output terminal
74-76	TES0-2	I	Test terminal (open)
77	VDD		Power terminal
78	XI	I	Crystal oscillator element connection terminal
79	XO	O	Crystal oscillator element connection terminal
80	Vss	I	GND

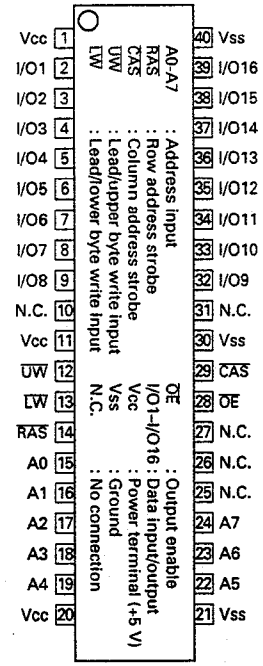
TC9331F



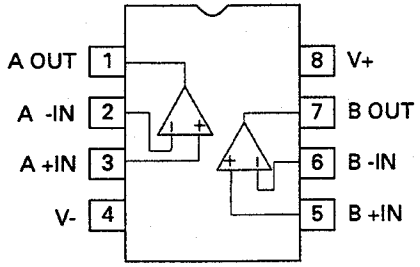
HD61602RH



TC511664BJI



NJM2100M

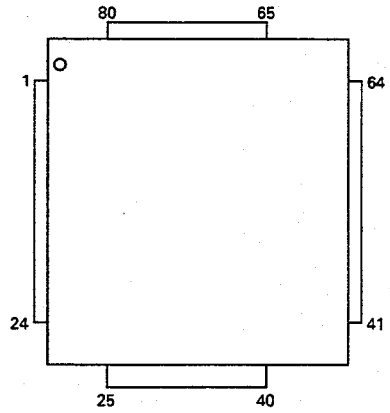


● **Pin Functions (PD5314A)**

Pin No.	Pin Name	I/O	Output Format	Function and Operation
1-3	COM2-0	O	C	Common output 2-0
4-6	VL3-1			
7	SB	O	C	
8	$\overline{CS}$	O	C	LCD drive chip select output
9	$\overline{WE}$	O	C	LCD drive write enable output
10	FX	O	C	LCD drive oscillation output
11, 12	$\overline{KST3, 2}$	O	C	Key strobe output 3, 2
13-16	$\overline{KDT3\text{-}0}$	I		Key data input 3-0
17, 18	$\overline{KST1, 0}$	O	C	Key strobe output 1, 0
19	KYDT/TSO	O	C	Key / test data output
20	DPDT/TSIN	I		Indication / test data input
21	NC			Not used
22	REMIN	I		Remote control input
23	$\overline{RE}$	O	C	LCD drive data reset output
24	$\overline{READY}$	I	C	LCD drive ready input
25	$\overline{RESET}$	I		Reset input
26, 27	$\overline{KST5, 4}$	O	C	Key strobe output 5, 4
28	XIN	I		Crystal oscillating element connection pin
29	XOUT	O		Crystal oscillating element connection pin
30	VSS			GND
31-38	D7-D0	O	C	LCD drive data output 7-0
39-70	SEG39-8	O	C	Segment output
71	VCC	O	C	Backup 5V
72-79	SEG7-0	O	C	Segment output 7-0
80	COM3	O	C	Common output 3

Output Format	Meaning
C	CMOS

*PD5314A



2. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/OSOOOJ,RS1/OOSOOOJ

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

=====Circuit Symbol & No. Part Name=====	Part No.
Audio Unit Consists of • Audio P.C.Board • P.C.Board	
Unit Number : CWM4254(DEQ-9200/UC) : CWM4256(DEQ-9200/EW)	
Unit Name : Audio Unit	
MISCELLANEOUS	
IC 301 311	PD2029AM
IC 302 312 354	TA2063F
IC 351	PD2026BML
IC 352	SN761025DL
IC 401	AK5340-VS
IC 501	PMJ003A
IC 551 561 851 852	NJM4558MD
IC 601	PD5313B
IC 602	S-80722ANDK
IC 701	TC9331F
IC 702	PD2038C
IC 751	TC511664BJI
IC 853	NJM2100M
IC 854	M5233FP
IC 952	NJM78M05A
Q 201	2SC2412K
Q 202 551 552 561 562 581 582	DTC314TK
Q 203	DTA124EK
Q 571 851 852	2SC2412K
Q 572 952 954	DTC124EK
Q 573	DTA124EK
Q 602 603 962	DTC124EK
Q 605	FMG5
Q 853 854	DTC314TK
Q 951	2SB1184F5
Q 953	2SA1162
Q 955	2SD1760F5
Q 956 958 960	2SC2412K
Q 957	2SD1859
Q 959 967	2SA1797
Q 969	DTC124EK
D 201	MA3039L
D 571 601 953	MA151K-MH
D 572	DTZ8R2B
D 602 603 604	MA3062H
D 605	MA8056H
D 851 852	MA8180M
D 951 956	ERA15-02VH
D 952	MA3082L
D 954	MA3091L
D 955	DTZ7R5C
D 957	DTZ6R2C
D 958	MA151WK
D 961	SC016-2
L 301 311 551 552 553 Inductor	LCTB2R2K2125

=====Circuit Symbol & No. Part Name=====	Part No.
L 302 312 351 401 701 703 751 Inductor	LCTA2R2J3225
L 561 562 563 581 582 Inductor	LCTB2R2K2125
L 583 851 852 Inductor	LCTB2R2K2125
L 601 Inductor	LCTA1R0J3225
L 951 Choke Coil	CTH1129
X 301 Crystal Resonator 11.2896MHz	CSS1088
X 601 Ceramic Resonator 4.9152MHz	CSS1084
X 701 Crystal Resonator 32MHz	CSS1360
S 601 Switch	CSG1020
S 602 Switch	HSH-156
EF 951 EMI Filter	CCG1006
RESISTORS	
R 201	RS1/10S223J
R 203 551 552 561 562 704 861 862 885 886	RS1/10S164J
R 204	RS1/10S222J
R 205	RS1/10S224J
R 206 208 573 963	RS1/10S103J
R 207	RS1/10S102J
R 209 574 605 607 614 616 618 624 625	RS1/10S473J
R 355 703	RS1/10S101J
R 356	RS1/10S101J
R 357	RS1/10S103J
R 358	RS1/10S223J
R 359 Resister Array	RA3C472J
R 363 364	RS1/10S562J
R 401 403 404 405 603 611 612 613 615 619	RS1/10S102J
R 402	RS1/10S0R0J
R 501	RS1/10S152J
R 502 503 504	RS1/10S302J
R 505	RS1/10S470J
R 553 554 563 564	RS1/10S123J
R 555 556 559 560 565 566 569 570 589 590	RS1/10S223J
R 557 558 567 568 587 588	RS1/10S821J
R 571	RS1/10S471J
R 572	RS1/10S561J
R 575 705 708 865	RS1/10S472J
R 576 851 852 857 858 859 860	RS1/10S223J
R 601	RS1/10S103J
R 602	RS1/10S124J
R 604 (DEQ-9200/EW)	RS1/10S473J
R 610 (DEQ-9200/UC)	RS1/10S473J
R 620 628 707 715 716 717 718 761 762	RS1/10S102J
R 627 710 887 888 956 957 958 960 961 962	RS1/10S473J
R 630 631 753 Resister Array	RA3C102J
R 701	RS1/10S105J
R 702	RS1/10S562J
R 706	RS1/10S0R0J
R 751 752 755	RA4C102J
R 754	RS1/10S102J
R 763 764 765 766 767 768 769 770 771 772	RS1/10S102J
R 773 883 884 969	RS1/10S102J
R 853 854	RS1/10S114J

=====Circuit Symbol & No. Part Name=====	Part No.
R 855 871 872	RS1/10S154J
R 856	RS1/10S154J
R 863 864	RS1/10S224J
R 866 867 868 873 874	RS1/10S472J
R 869 870	RS1/10S682J
R 875 876	RS1/10S331J
R 877 878	RS1/10S221J
R 879	RS1/10S103J
R 880	RS1/10S223J
R 881 882	RS1/10S151J
R 889 890	RS1/10S433J
R 951	RS1/10S473J
R 952	RS1/10S473J
R 953	RS1/2S681J
R 954	RS1/10S101J
R 959	RS1/10S472J
R 964 970 971 980	RS1/10S473J
R 972	RS1/4S472J
R 978	RS1/8S471J
R 981	RS1/10S222J
R 984	RS1/10S103J
R 986	RS1/10S223J
R 987	RS1/10S472J
CAPACITORS	
C 201 887 888	CEA4R7M16NPLL
C 202	CKSQYB681K50
C 204 571 958 100μF/10V	CCH1191
C 301 302 304 311 312 314 350 352 360 373	CKSQYB104K16
C 303 305 307 308 313 10μF/16V	CCH1190
C 306 316 358 379 380 603	CCSQCH101J50
C 309 319 355 386 406 408 573 609 704 705	CKSQYB103K25
C 310 320 356 961	CEAS470M10
C 315 317 318 351 354 10μF/16V	CCH1190
C 321 322 323 605 606 607 608 610 611 612	CCSQCH220J50
C 324	CCSQCH220J50
C 357 359 361 362 367 10μF/16V	CCH1190
C 363 364	CEA100M16NPLL
C 368 381 388 10μF/16V	CCH1190
C 369	CKSQYB102K50
C 370	CKSQYB102K50
C 371 372	CKSQYB104K16
C 374 375 376 377 378 385 522 523 527	CKSQYB104K16
C 382 525 601	CEAS2R2M50
C 383 384	CEA100M16NPLL
C 401 853 854 855 856 857 858 863 864	CEA4R7M35LL
C 402 501 502 503 504 505 506 511 512 513	CEAS4R7M35
C 403 404	CKSQYB473K50
C 405 407 526 553 554 10μF/16V	CCH1190
C 514 515 516	CEAS4R7M35
C 521	CKSQYB103K25
C 524	CEAS220M10
C 551 552 561 562 708 709	CCSQCH100J50
C 555 556 565 566	CKSQYB102K50
C 563 564 572 574 583 10μF/16V	CCH1190
C 584 602 604 703 10μF/16V	CCH1190
C 585 586	CKSQYB224K16
C 614	CCSQCH101J50
C 701	CEAS330M16
C 706	CKSYB684K16
C 707	CKSQYB391K50
C 710 752 861 862 870 878 883 884 956 957	CKSQYB103K25
C 711 712 751 753 871 10μF/16V	CCH1190
C 851 852	CEA010M50LL
C 859 860	CCSQCH100J50

=====Circuit Symbol & No. Part Name=====	Part No.
C 865 866	CCSQCH120J50
C 867 868	CKSQYB332K50
C 869 881 882 220μF/10V	CCH1193
C 872 873 874 877 954 955 969 10μF/16V	CCH1190
C 879	CEV470M6R3
C 951 968 1000μF/16V	CCH1185
C 952	CKSQYB473K50
C 953	CKSYB105K16
C 959 960	CKSQYB103K25
C 962 0.22F/5.5V	CCL1037
Unit Number : CWS1294(DEQ-9200/UC) : CWS1295(DEQ-9200/EW)	
Unit Name : Key Board Unit	
MISCELLANEOUS	
IC 901	PD5314A
IC 902	HD61602RH
IC 905 HIC Modul	RS-30
D 901 902	MA143
D 904 905 906 907 908 LED	CL170FGCD
D 909 911 912 913 914 LED	CL170FGCD
D 915 916 917 LED	CL170FGCD
D 926	MA141K
L 902 903 Inductor	LCTB2R2K2125
L 991 Inductor	LCTA4R7K4532
X 901 Ceramic Resonator 4.9152MHz	CSS1084
S 901 902 903 904 905 Switch	CSG1041
S 906 907 908 909 910 Switch	CSG1041
S 911 912 913 914 915 Switch	CSG1041
S 916 917 918 919 920 Switch	CSG1041
S 921 Switch	CSG1041
IL 901 902 Lamp 40mA/14V	CEL1436
LCD901 LCD	CAW1322
CN992 EL	CEL1430
RESISTORS	
R 901 902	RS1/10S222J
R 904	RS1/10S121J
R 906 907 908 909 910 911 912 913 914 915	RS1/10S470J
R 920 923 935 936 955	RS1/10S473J
R 921 922	RS1/10S222J
R 924 925 926 929 930 931	RS1/10S472J
R 933 997	RS1/10S102J
R 934 Resister Array	RA3C102J
R 938 942	RA4C102J
R 945	RS1/10S393J
R 946 950	RS1/2S391J
R 947	RS1/2S391J
R 991	RS1/2S391J
R 992	RS1/10S102J
R 996	RS1/2S681J
R 998	RS1/10S2R2J
R 999	RS1/10S0R0J
CAPACITORS	
C 901 902	CSZSR100M6R3
C 914 921	CKSQYB104K16
C 915 916 917 919 920	CKSQYB473K50
C 922	CKSQYB273K50
Unit Number : CWX1858(DEQ-9200/UC) : CWX1859(DEQ-9200/EW)	
Unit Name : Panel Unit	
MISCELLANEOUS	
Q 1962 1963	2SC2412K
Q 1964	2SA1037K
Q 1965 1966	2SD1760F5
Q 1967	2SC2412K

=====Circuit Symbol & No.	Part Name=====	Part No.
D 1959		MA3047M
D 1960		MA3082L
L 1901	Transformer	CTT1038
L 1902	Inductor	LCTA1R0J3225
S 1901	Switch	CSN1027
BZ1601	Buzzer	CPV1011
RESISTORS		
R 1608 1609		RS1/10S102J
R 1610 1611 1980 1981 1982		RS1/10S103J
R 1965		RS1/4S102J
R 1966 1979		RS1/2S180J
R 1967		RS1/10S512J
R 1968		RS1/10S241J
R 1974 1977		RS1/10S472J
R 1975 1976		RS1/10S473J
R 1983 1984		RS1/10S224J
R 1985		RS1/10S102J
CAPACITORS		
C 1963		CKSQYB103K50
C 1964 1965 1966		CEV100M16
C 1967		CKSQYB473K50
Miscellaneous Parts List		
	Microphone Assy	CPM1012

3. BLOCK DIAGRAM

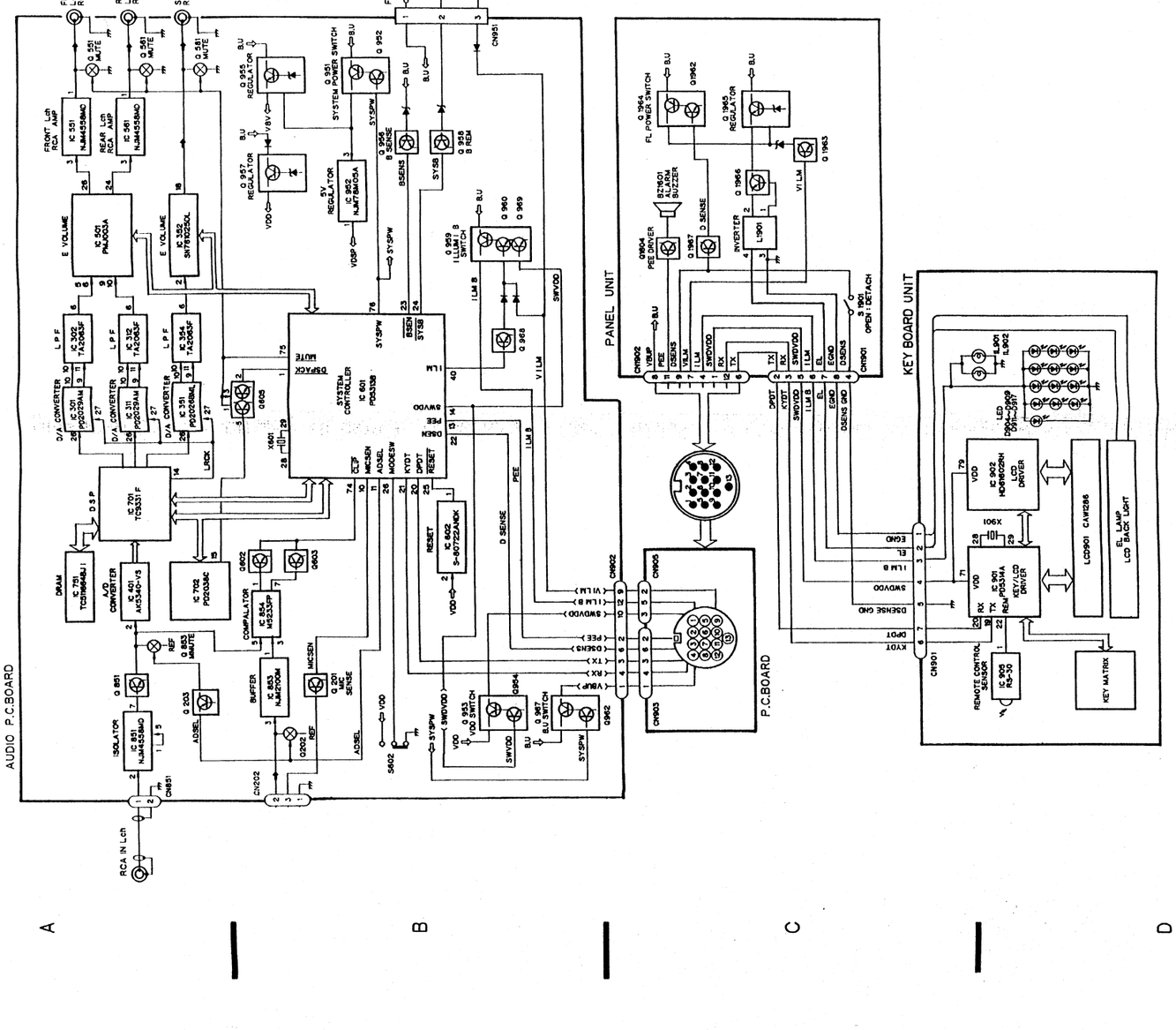
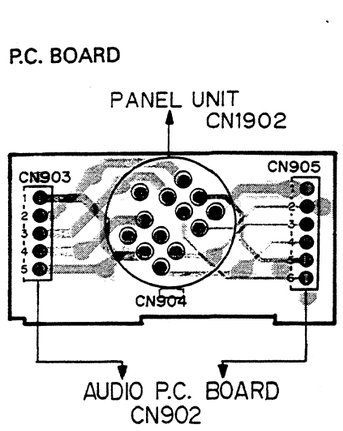


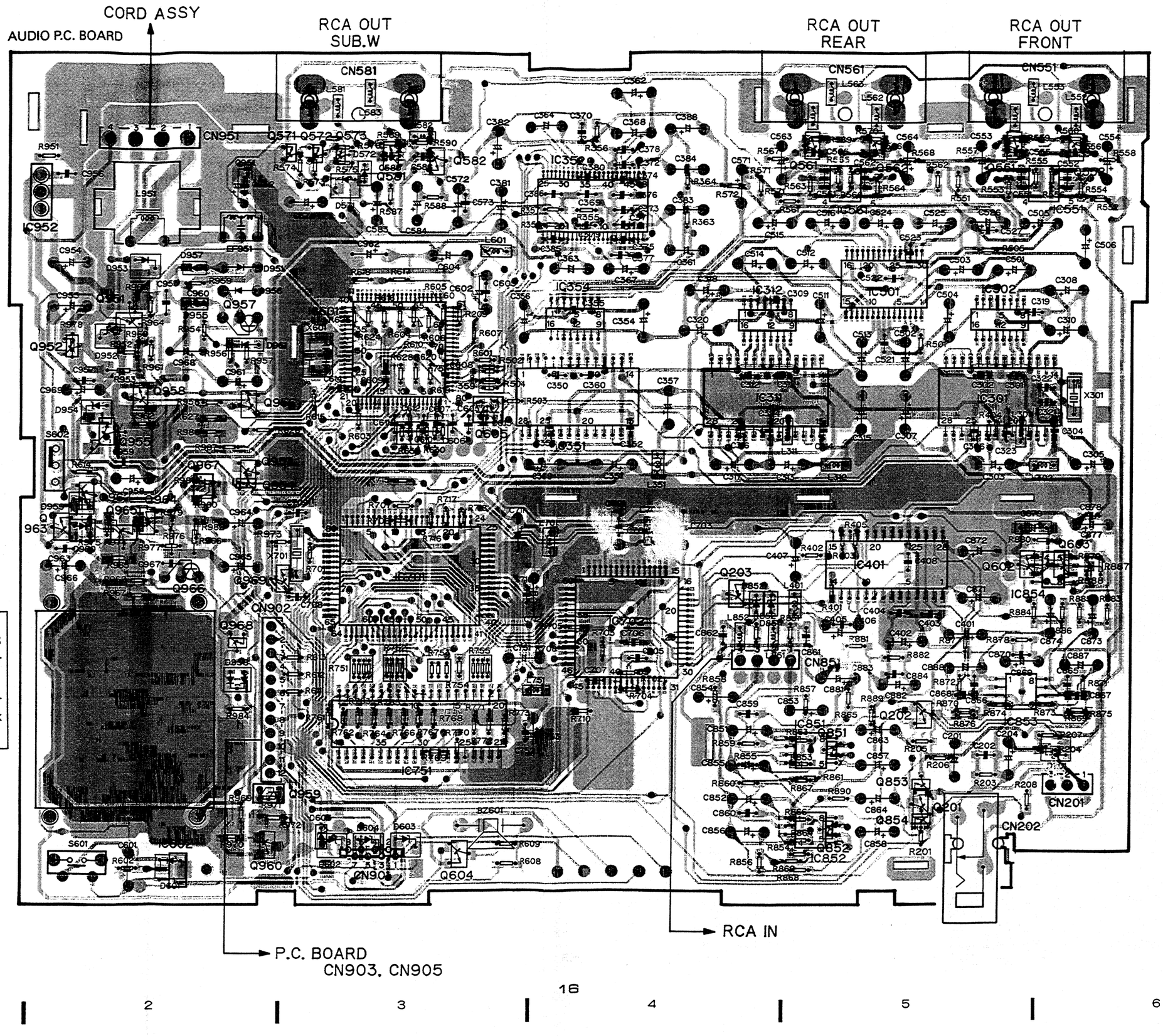
Fig.6

● LCD(CAW1322)

Fig.5

4. CONNECTION DIAGRAM





IC, Q

Q581 Q582
Q552 Q561
Q551 Q562
Q571 Q572
Q573
IC561 IC551
IC952
IC352

IC501

Q951 Q957
Q952 IC354
IC302 IC312

IC601

IC301 Q956
IC311 Q958
IC351 Q955
Q605

Q953
Q964
Q967
Q962 Q954
Q963 Q965

Q969
Q966 IC701
Q602 IC401
Q603 IC854
Q203

IC702
Q968

IC853
Q202
IC751

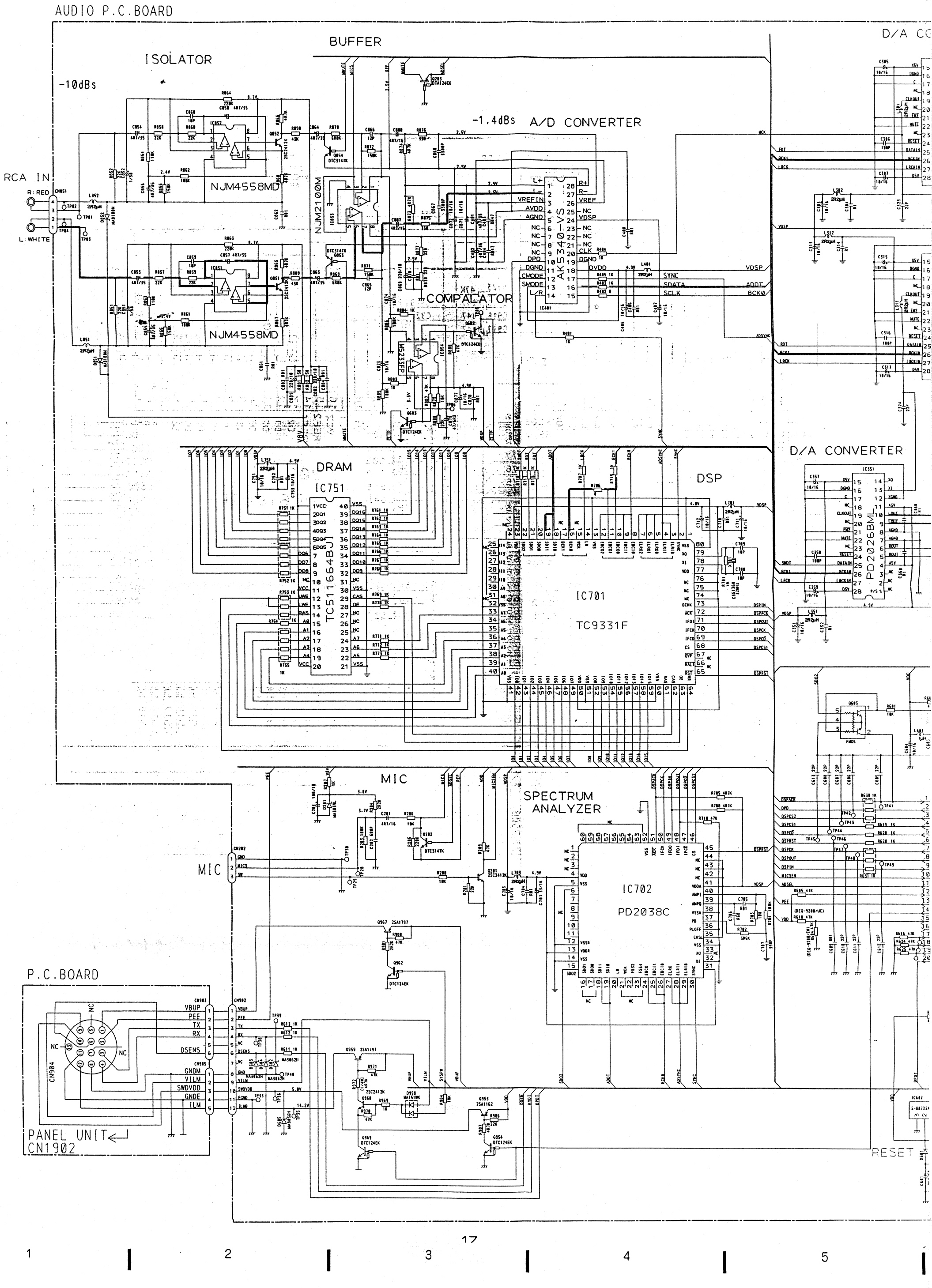
IC851
Q851

Q853
Q201 Q959
Q852
Q854
IC852
Q960 Q604
IC602

NOTE:
The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

Fig.7

5. SCHEMATIC CIRCUIT DIAGRAM



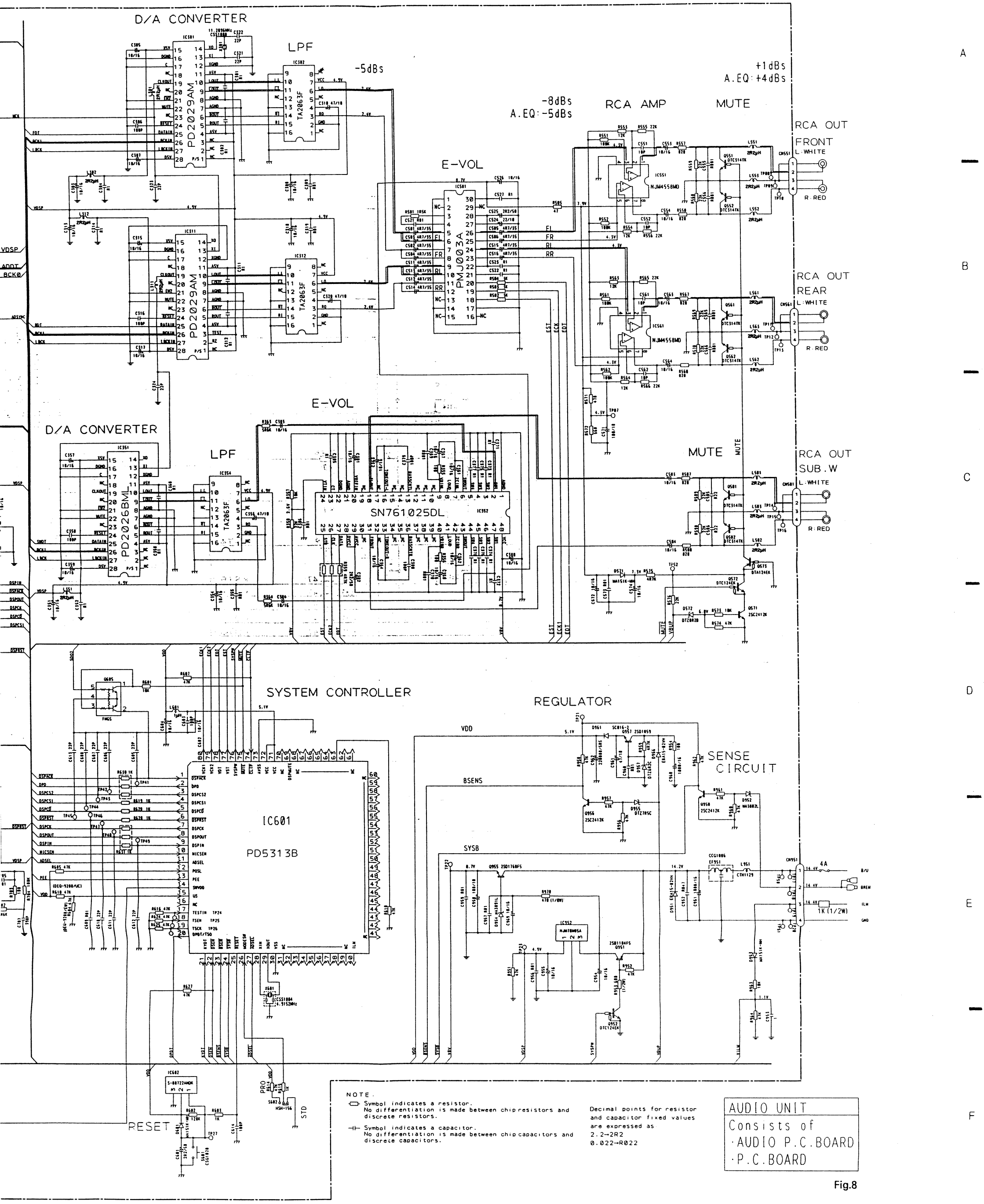
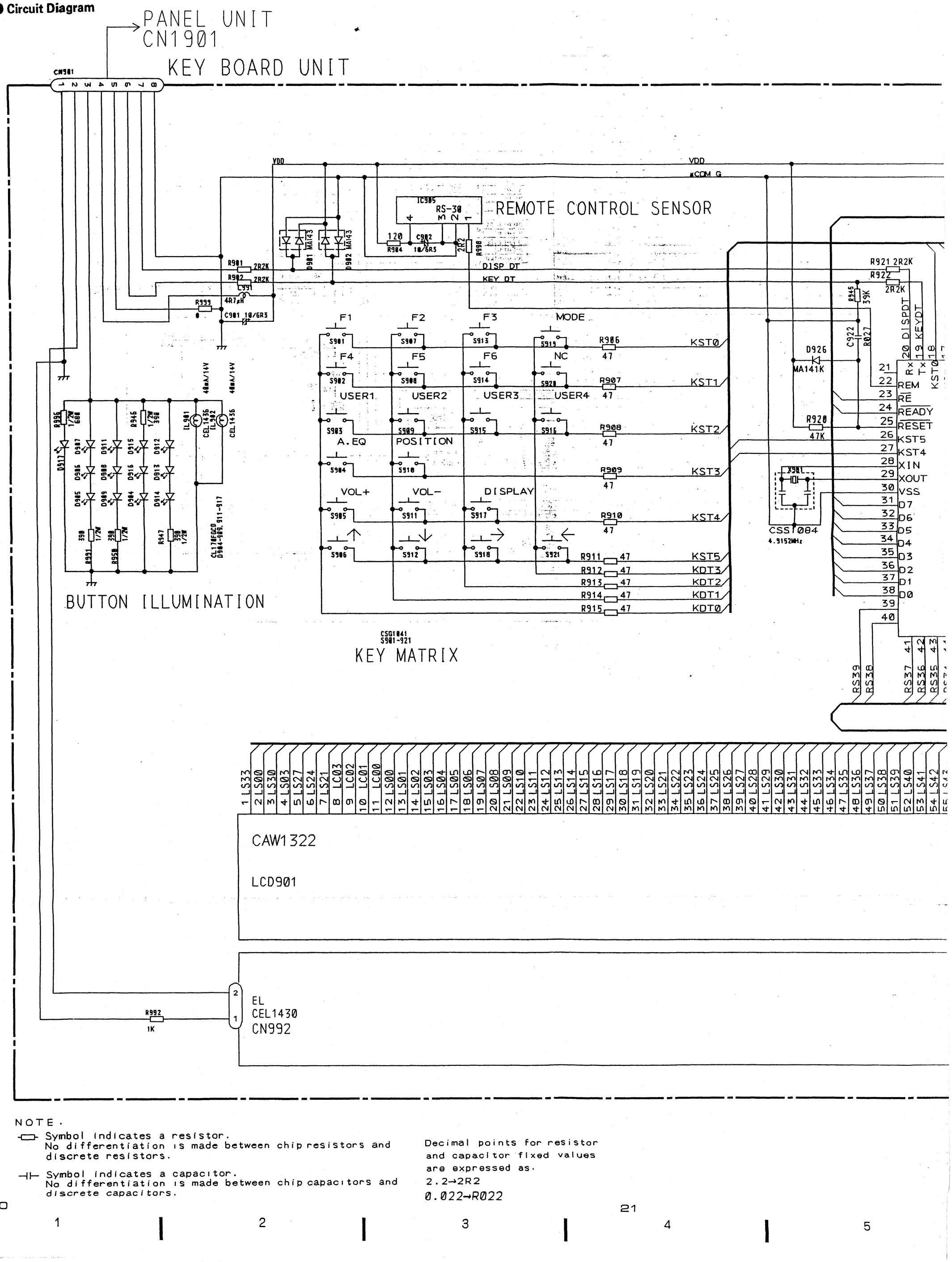

D/A CONVERTER
LPF
-5dBs
E-VOL
-8dBs
A.EQ:-5dBs
RCA AMP
MUTE
+1dBs
A.EQ:+4dBs
RCA OUT
FRONT
L:WHITE
R:RED
RCA OUT
REAR
L:WHITE
R:RED
RCA OUT
SUB.W
L:WHITE
R:RED
PD2029AM
TA2063F
PMJ003A
NJM4558MD
D/A CONVERTER
PD2026BML
SN761025DL
SYSTEM CONTROLLER
IC601
PD5313B
REGULATOR
SENSE
CIRCUIT
RESET
S-80722ANDK
VDD
BSENS
SYSB
4A
1K(1/2W)
NOTE.
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as
2.2→2R2
0.022→R022
AUDIO UNIT
Consists of
·AUDIO P.C.BOARD
·P.C.BOARD

Fig.8

6. CIRCUIT DIAGRAM AND PATTERN

6.1 KEY BOARD UNIT

● **Circuit Diagram**



NOTE.

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as.
2.2→2R2
0.022→R022

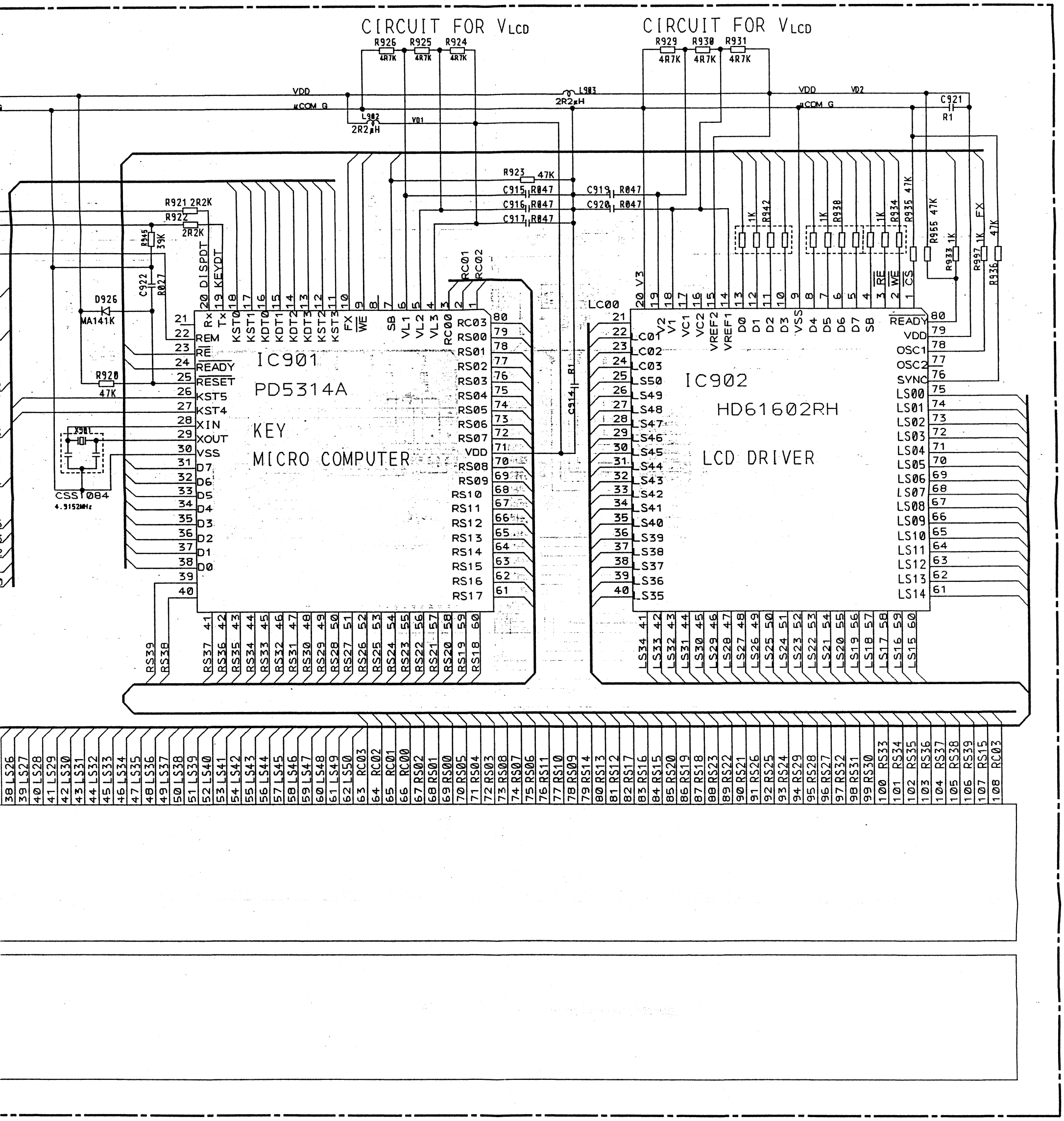
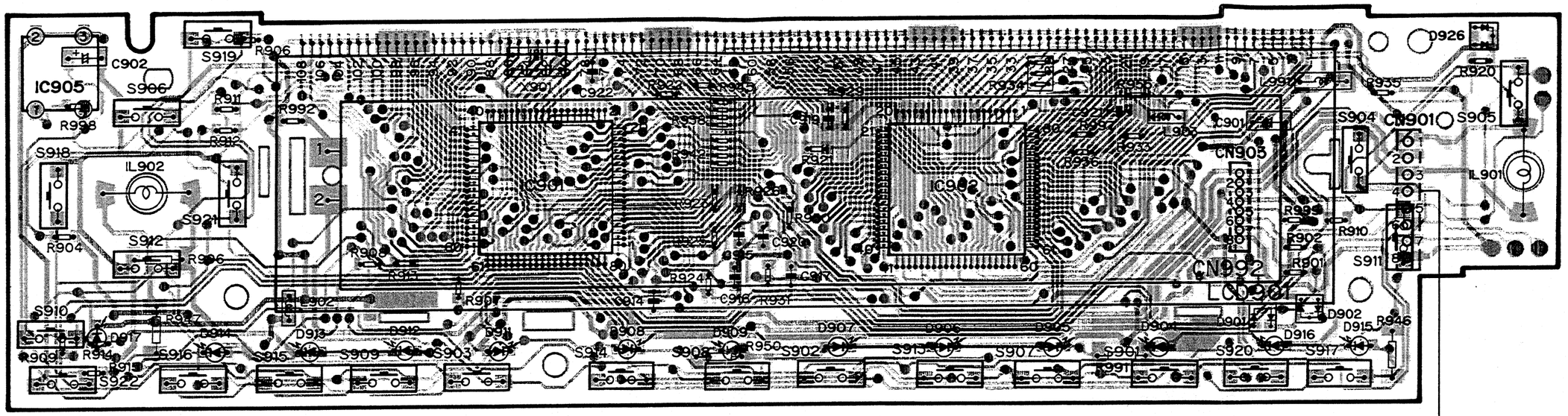

CIRCUIT FOR VLCD
CIRCUIT FOR VLCD
R926 4R7K
R925 4R7K
R924 4R7K
R929 4R7K
R930 4R7K
R931 4R7K
VDD
µCOM G
L902 2R2µH
VD1
L903 2R2µH
VD2
C921 R1
R923 47K
C915 R047
C916 R047
C917 R047
C919 R047
C920 R047
R921 2R2K
R922 2R2K
R945 39K
C922
R027
D926 MA141K
R920 47K
X901 CSS1084 4.9152MHz
20 DISPDT
19 KEYDT
IC901
PD5314A
KEY
MICRO COMPUTER
IC902
HD61602RH
LCD DRIVER
RC01
RC02
C914
B1
LC00
R942 1K
R938 1K
R934 1K
R935 47K
R955 47K
R933 1K
R997 1K FX
R936 47K
RE
WE
CS
READY
RESET
KST5
KST4
XIN
XOUT
VSS
VDD
OSC1
OSC2
SYNC
RS39
RS38

Fig.9

● **Connection Diagram**

KEY BOARD UNIT

IC IC905 IC901 IC902



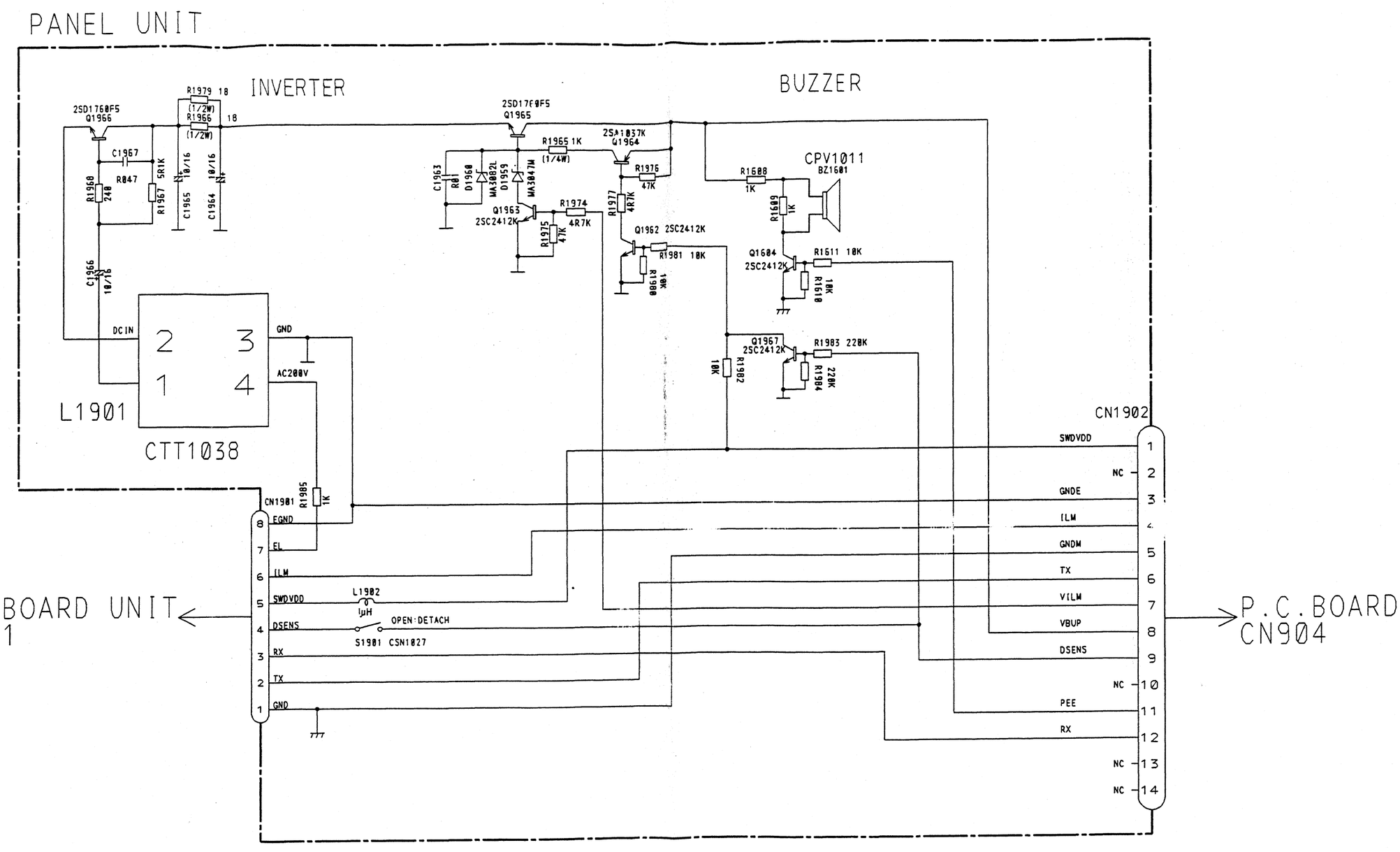
PANEL UNIT CN1901 ←

NOTE:
The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

Fig. 10

6.2 PANEL UNIT

● **Circuit Diagram**



NOTE:

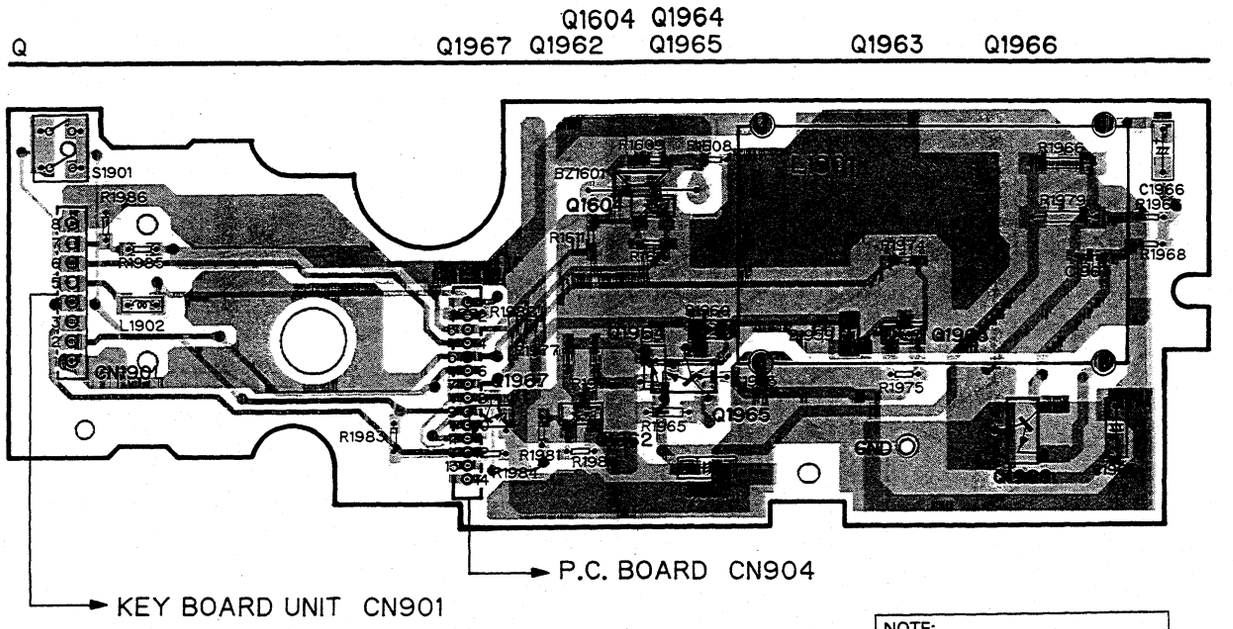
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022

Fig.11

● Connection Diagram

PANEL UNIT



NOTE:
The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

Fig.12

7. EXPLODED VIEW

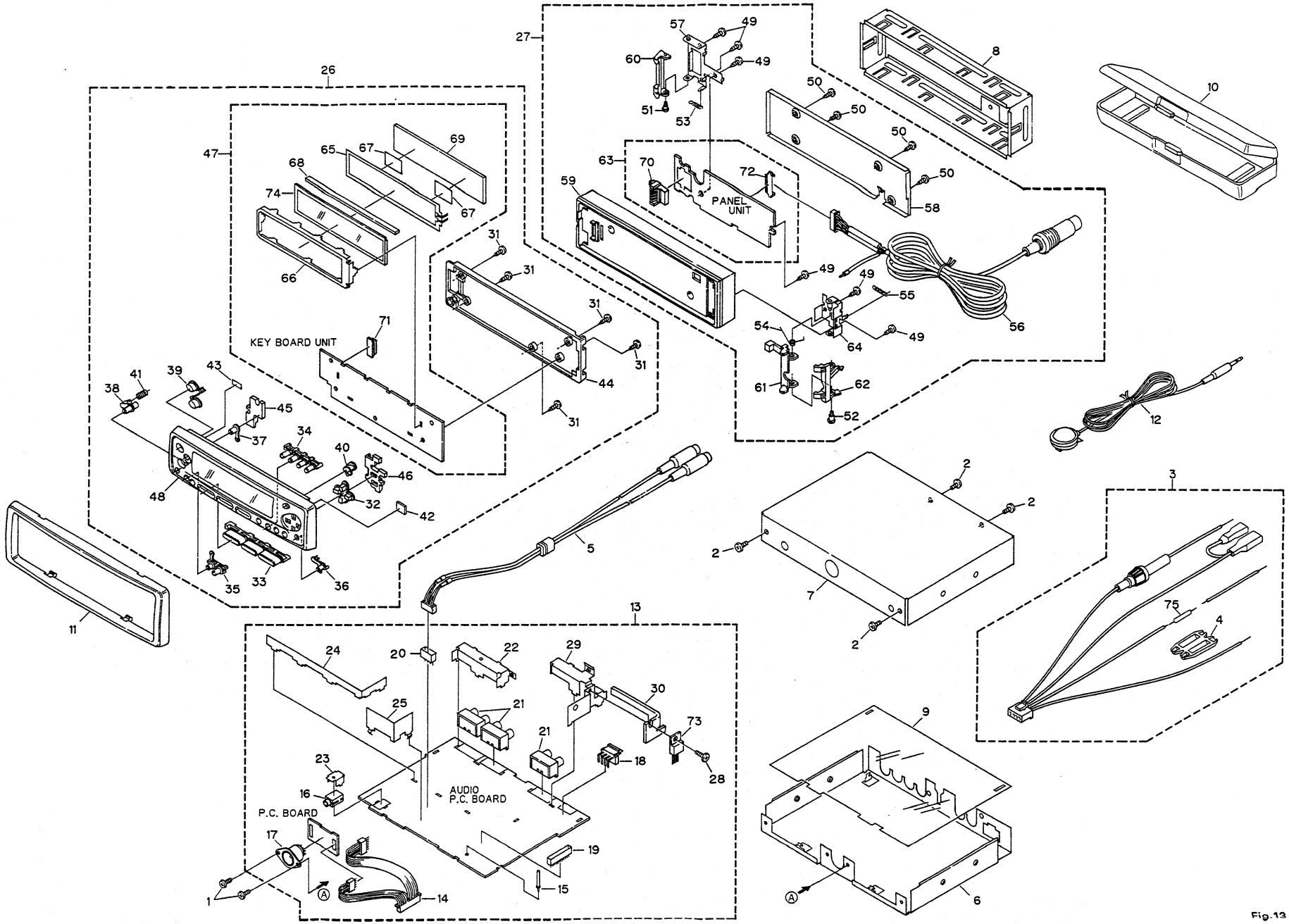


Fig.13

NOTE:

- Parts marked by "✱" are generally unavailable because they are not in our Master Spare Parts List.
- Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

● Parts List

Mark	No.	Description	Part No.
	1	Screw	BSZ26P040FMC
	2	Screw	BSZ30P055FZK
	3	Cord Assy(UC)	CDE4600
		Cord Assy(EW)	CDE4590
	4	Cap	CNS1472
	5	Cord	CDE4594
✱	6	Chassis	CNA1714
	7	Case	CNB1940
	8	Holder	CNC5829
	9	Insulator	CNM4320
	10	Case	CNS2269
	11	Panel	CNS3524
	12	Microphone Assy	CPM1012
	13	Audio Unit(UC)	CWM4254
		Audio Unit(EW)	CWM4256
	14	Connector	CDE4604
	15	Clamper	CEF1006
	16	Mini Jack(CN202)	CKN1009
	17	Socket	CKP1007
	18	Plug(4P)(CN951)	CKS-461
	19	Plug(12P)(CN902)	CKS1045
	20	Plug(4P)(CN851)	CKS1224
	21	Pin Jack(CN551,561,581)	CKS3144
	22	Holder	CNC5830
	23	Holder	CNC5834
	24	Earth Plate	CNC5835
	25	Shield	CNC6124
	26	Detach Grille Assy(UC)	CXA7657
		Detach Grille Assy(EW)	CXA7660
	27	Panel Assy(UC)	CXA7658
		Panel Assy(EW)	CXA7661
	28	Screw	BSZ30P080FMC
	29	Holder	CNC5831
	30	Heat Sink	CNC6129
	31	Screw	BPZ20P080FZK
	32	Button(↑,↓,←,→)	CAC4276
	33	Button(F1-F6)	CAC4277
	34	Button(U1,U2,U3,U4)	CAC4278
	35	Button(D,N)	CAC4279
	36	Button(P)	CAC4280
	37	Button(EQ)	CAC4287
	38	Button(Detach)	CAC4294
	39	Button(+,-)	CAC4398
	40	Button(M)	CAC4399
	41	Spring	CBH1571
	42	Plate	CNM4529
	43	•••••	
	44	Cover	CNS3499
	45	Plate	CNV4159
	46	Plate	CNV4160
	47	Key Board Unit(UC)	CWS1294
		Key Board Unit(EW)	CWS1295
	48	Grille Unit	CXA8521
	49	Screw	BPZ20P060FMC
	50	Screw	BPZ26P080FZK
	51	Screw	CBA1215
	52	Screw	CBA1271
	53	Spring	CBH1477
	54	Spring	CBH1566
	55	Spring	CBH1567
	56	Cord Assy	CDE4592
	57	Holder	CNC5238
	58	Holder	CNC5836
	59	Panel	CNS3498
	60	Arm	CNV3637
	61	Arm	CNV3654
	62	Arm	CNV3655
	63	Panel Unit(UC)	CWX1858
		Panel Unit(EW)	CWX1859
	64	Holder Unit	CXA5779
	65	EL(CN992)	CEL1430
	66	Holder	CNC6239
	67	Film	CNM4349
	68	Connector	CNV4163
	69	Housing	CNV4196
	70	Connector(8P)(CN1901)	CKS3268
	71	Connector(8P)(CN901)	CKS2733
	72	Connector(14P)(CN1902)	CKS2203
	73	IC(IC952)	NJM78M05A
	74	LCD(LCD901)	CAW1322
	75	Resistor	RS1/2P102JL

8. PACKING METHOD

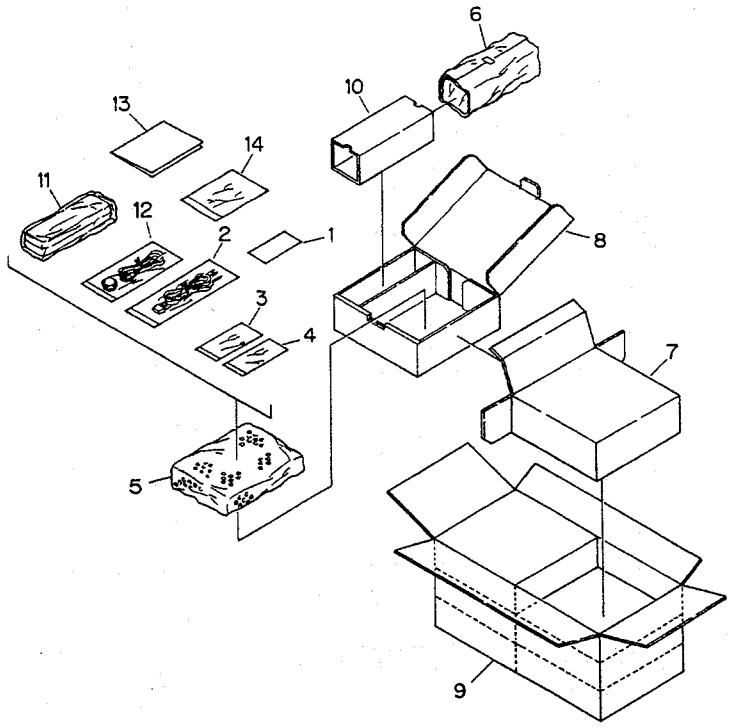


Fig.14

● **Parts List**

Mark	No.	Description	Part No.
*	1	Card(UC)	ARY1048
*		Warranty Card(EW)	CRY1087
	2	Cord Assy(UC)	CDE4593
		Cord Assy(EW)	CDE4590
	3	Screw Assy	CEA2057
	4	Screw Assy	CEA2136
	5	Air Cushioned Bag	CEG1076
	6	Cover	CEG1202
	7	Carton(UC)	CHG2742
		Carton(EW)	CHG2741
	8	Sub Carton	CHG2743
	9	Contain Box(UC)	CHL2742
		Contain Box(EW)	CHL2741
	10	Spacer	CHW1468
	11	Case	CNS2269

* : Non Spare Part

Mark	No.	Description	Part No.
	12	Microphone Assy	CPM1012
	13	Owner's Manual(UC)	CRD1911
		Owner's Manual(EW)	CRD1909
		Owner's Manual(EW)	CRD1910
		Owner's Manual(EW)	CRD1921
*	14-1	Polyethylene Bag	CEG-238
	14-2	Installation Angle(×2)	CNB1918
	14-3	Bracket	CNC4290
	14-4	Bracket	CNC4291
	14-5	Fastener(×2)	CNM-667
	14-6	Fastener(×2)	CNM1716
	14-7	Fastener(×2)	CNM1717

● **Owner's Manual**

Model	Part No.	Language
DEQ-9200/UC	CRD1911	English, French
DEQ-9200/EW	CRD1909	English, Italian, French
	CRD1910	German, Dutch, Spanish
	CRD1921	Swedish, Norwegian, Finnish

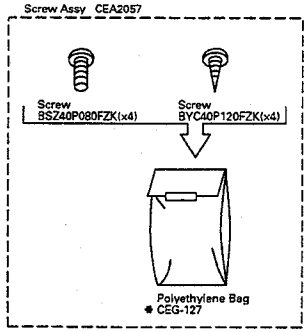


Fig.15

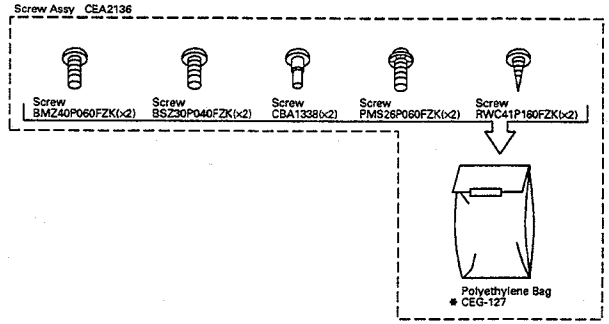


Fig.16

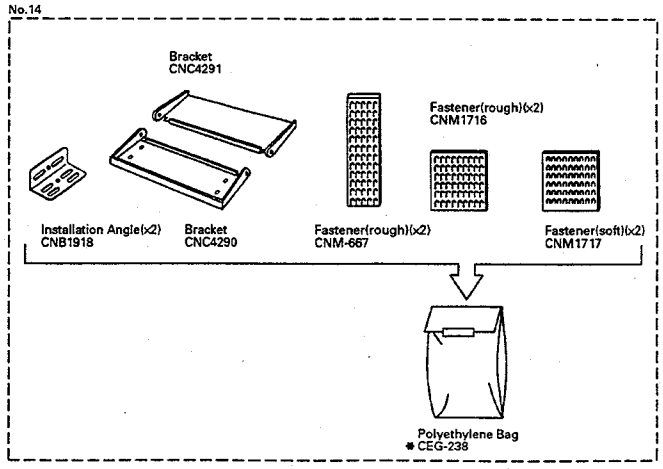


Fig.17

9. SPECIFICATIONS

● DEQ-9200/UC

General

Power source ..... 14.4 V DC (10.8 — 15.6 V allowable)
Grounding system ..... Negative type
Dimensions
(Display) (DIN) ..... 188 (W) x 58 (H) x 29.7 (D) mm
[7-3/8 (W) x 2-1/4 (H) x 1-1/8 (D) in.]
(D) ..... 170 (W) x 46 (H) x 37.2 (D) mm
[6-3/4 (W) x 1-3/4 (H) x 1-1/2 (D) in.]
(Hide-away) ..... 183 (W) x 28.5 (H) x 135 (D) mm
[7-1/4 (W) x 1-1/8 (H) x 5-3/8 (D) in.]
Weight ..... 1.0 kg (2.2 lbs.)

DSP

Equalizer (3-band parametric)
Frequency ..... 20 Hz — 20 kHz, 1/3 oct.
Level ..... ±10 dB
Auto-equalizer (STD mode)
(Front & sub-woofer 4-band + rear 3-band parametric)
Frequency ..... 80 Hz — 8 kHz, 1/3 oct.
Level ..... +6 dB — −10 dB
Q factor 1.2, 2.6
Auto-equalizer (PRO mode)
(4-band parametric)
Frequency ..... 80 Hz — 20 kHz, 1/3 oct.
Level ..... +6 dB — −10 dB
Q factor 1.2, 2.6

Network (STD mode)
Front/Rear ..... HPF frequency: 50 Hz — 200 Hz, 2/3 oct.
Slope: 0, −6, −12 dB/oct.
Level: 0 — −24 dB (1 dB)
Subwoofer (mono) ..... LPF frequency: 50 Hz — 200 Hz, 1/3 oct.
Slope: −6, −12, −18 dB/oct.
Level: +6 — −24 dB (1 dB)
Phase: Normal/Reverse
Network (PRO mode)
HIGH ..... HPF frequency: 2.5 kHz — 10 kHz, 1/3 oct.
Slope: −6, −12, −18 dB/oct.
Level: +6 — −24 dB (1 dB)
Phase: Normal/Reverse
MID ..... LPF frequency: 2.5 kHz — 10 kHz, 1/3 oct.
HPF frequency: 40 Hz — 160 Hz, 1/3 oct.
Slope: 0, −6, −12, −18 dB/oct.
Level: 0 — −24 dB (1 dB)
Phase: Normal/Reverse
LOW (stereo/mono) ..... LPF frequency: 40 Hz — 160 Hz, 1/3 oct.
Slope: −12, −18, −24 dB/oct
Level: +6 — −24 dB (1 dB)
Phase: Normal/Reverse
Time alignment ..... 0 — 160 inch (0.5 inch)
0 — 400 cm (2 cm)
Frequency response ..... 20 — 20,000 Hz (0, −1 dB)
Signal-to-noise ratio ..... 85 dB (IHF-A network)
Input level/impedance ..... 500 mV/22 kΩ
Output level/impedance ..... 500 mV/1 kΩ

These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

Note:
Specifications and the design are subject to possible modification without notice due to improvements.

● DEQ-9200/EW

General

Power source ..... 14.4 V DC (10.8 — 15.6 V allowable)
Grounding system ..... Negative type
Dimensions
(Display) (DIN) ..... 188 (W) x 58 (H) x 29.7 (D) mm
(D) ..... 170 (W) x 46 (H) x 37.2 (D) mm
(Hide-away) ..... 183 (W) x 28.5 (H) x 135 (D) mm
Weight ..... 1.0 kg

DSP

Equalizer (3-band parametric)
Frequency ..... 20 Hz — 20 kHz, 1/3 oct.
Level ..... ±10 dB
Auto-equalizer (STD mode)
(Front & sub-woofer 4-band + rear 3-band parametric)
Frequency ..... 80 Hz — 8 kHz, 1/3 oct.
Level ..... +6 dB — −10 dB
Q factor 1.2, 2.6
Auto-equalizer (PRO mode)
(4-band parametric)
Frequency ..... 80 Hz — 20 kHz, 1/3 oct.
Level ..... +6 dB — −10 dB
Q factor 1.2, 2.6

Network (STD mode)
Front/Rear ..... HPF frequency: 50 Hz — 200 Hz, 2/3 oct.
Slope: 0, −6, −12 dB/oct.
Level: 0 — −24 dB (1 dB)
Subwoofer (mono) ..... LPF frequency: 50 Hz — 200 Hz, 1/3 oct.
Slope: −6, −12, −18 dB/oct.
Level: +6 — −24 dB (1 dB)
Phase: Normal/Reverse
Network (PRO mode)
HIGH ..... HPF frequency: 2.5 kHz — 10 kHz, 1/3 oct.
Slope: −6, −12, −18 dB/oct.
Level: +6 — −24 dB (1 dB)
Phase: Normal/Reverse
MID ..... LPF frequency: 2.5 kHz — 10 kHz, 1/3 oct.
HPF frequency: 40 Hz — 160 Hz, 1/3 oct.
Slope: 0, −6, −12, −18 dB/oct.
Level: 0 — −24 dB (1 dB)
Phase: Normal/Reverse
LOW (stereo/mono) ..... LPF frequency: 40 Hz — 160 Hz, 1/3 oct.
Slope: −12, −18, −24 dB/oct
Level: +6 — −24 dB (1 dB)
Phase: Normal/Reverse
Time alignment ..... 0 — 400 cm (2 cm)
0 — 160 inch (0.5 inch)
Frequency response ..... 20 — 20,000 Hz (0, −1 dB)
Signal-to-noise ratio ..... 85 dB (IEC-A network)
Input level/impedance ..... 500 mV/22 kΩ
Output level/impedance ..... 500 mV/1 kΩ

Note:
Specifications and the design are subject to possible modification without notice due to improvements.

10. OPERATIONS AND CONNECTION

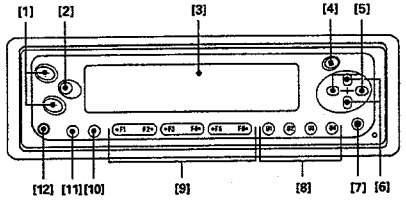


Fig. 18

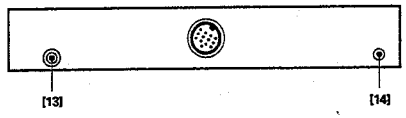


Fig. 19

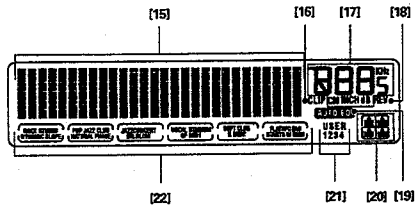


Fig. 20

Connection Diagram PRO
(Fig. 21)

1. Control unit
2. Hide-away unit
When this connection is made, be sure to set the PRO/STD switch in the hide-away unit to PRO mode. In the PRO mode, the front outputs supply the signals for high frequency range and the rear outputs supply the signals for middle/bass range.
3. Sub-woofer output
4. Rear output
(Middle/bass output)
5. Front output
(High-range output)
6. External input
7. Rear output
8. Front output
Not used in this connection.
9. Sub-woofer output
Not used in this connection.
10. Head unit (Ex. KEH-P8200)
11. Connecting cord with RCA pin plugs (sold separately)
Connect red to red and white to white.
12. Blue
To system control terminals of the head unit and power amp.
13. Blue
14. Black (ground)
To vehicle (metal) body.
15. Yellow
To lighting switch terminal.
16. Orange
To terminal always supplied with power regardless of ignition switch position.
17. Fuse resistor
18. Fuse holder
19. Power amp (sold separately)
20. *High range speakers*
21. *Middle/bass speakers*
22. Sub-woofers

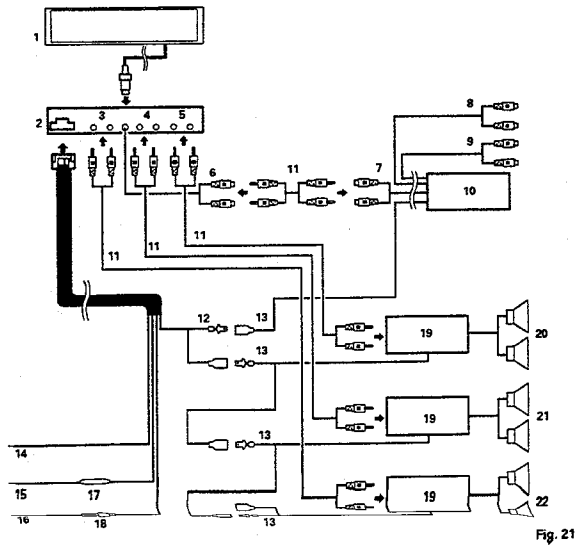


Fig. 21

Using the Removable Front Panel

Parts Identification
Fig. 18
[3] Display
[12] Detach button

Basic Operations of the Unit

Parts Identification
Fig. 18
[4] Mode shift button
[11] Display selector button

Fig. 19
[14] Clear button

Fig. 20
[15] Operation display

Setting the Head Unit

Parts Identification
Fig 18
[1] Volume buttons

Fig. 20
[16] Sound clip indicator

Adjusting the Volume PRO

Parts Identification
Fig. 18
[1] Volume buttons

Fig. 20
[17] Numeric display

Time Alignment PRO

Parts Identification
Fig. 18
[4] Mode shift button
[5] Distance up/down buttons
[6] Speaker selector buttons
[7] Position selector button
[10] Unit selector button
[11] Display selector button

Fig. 20
[15] Operation display
[17] Numeric display
[20] Position indicator

Adjusting Network

Parts Identification
Fig. 18
[4] Mode shift button
[5] Frequency up/down buttons
[6] Level up/down buttons
[9] Function buttons
(F1) Slope selector
(F2) Phase selector
(F3) LOW
(F4) MID 1 /F
(F5) MID 2 /R
(F6) HIGH /SW
[11] Display selector button

Fig. 20
[15] Operation display
[17] Numeric display
[18] Phase reverse indicator
[22] Function indicators

Sound Field Control Function STD

Parts Identification
Fig. 18
[4] Mode shift button
[5] SFC delay time up/down buttons
[6] SFC level up/down buttons
SFC fader control buttons
[9] Function buttons
(F1) STUDIO
(F2) JAZZCLUB
(F3) CONCERT
(F4) STADIUM
(F5) CLUB
(F6) SFC fader adjustment mode
[11] Display selector button

Fig. 20
[15] Operation display
[17] Numeric display
[22] Function indicators

Auto-Equalizing Function

Parts Identification
Fig. 18
[2] Auto-equalization button
[5] Frequency up/down buttons
[6] Level up/down buttons
[7] Position selector button
[9] Function buttons
(F1) DYNAMIC
(F2) NATURAL
(F3) MILD
(F4) Q factor selector
(F6) Start of auto-equalization
[10] Auto-equalizer curve fine-adjustment mode

Fig. 19
[13] Microphone jack

Fig. 20
[15] Operation display
[17] Numeric display
[19] Auto-equalization indicator
[20] Position indicator
[22] Function indicators

Adjusting Equalizer Curve

Parts Identification
Fig. 18
[4] Mode shift button
[5] Frequency up/down buttons
[6] Nuance control up/down buttons
Level up/down buttons
[8] User's curve memory buttons
[9] Function buttons
(F1) ROCK
(F2) POP
(F3) JAZZ
(F4) VOCAL
(F5) SOFT
(F6) FLAT
[10] 3-band parametric equalizer adjustment mode/nuance control mode selector button
[11] Display selector button

Fig. 20
[15] Operation display
[17] Numeric display
[21] User's curve memory indicators
[22] Function indicators

Adjusting the Listening Position

Parts Identification
Fig. 18
[4] Mode shift button
[5] Fader control buttons
[6] Balance control buttons
[7] Position selector button
[11] Display selector button

Fig. 20
[15] Operation display
[17] Numeric display
[20] Position indicator

Using the Remote Control

When the DSP/MAIN UNIT switch in the remote controller supplied with head unit is set to "DSP", some functions of this unit can be performed with the remote controller.

- The volume buttons and the attenuator button operate this unit directly and do not operate the head unit. (The volume level of the head unit can be adjusted with the volume buttons in the head unit.)
- Some functions of this unit can be operated with the DSP button.

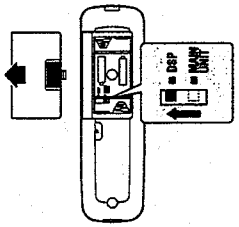


Fig. 22

Parts Identification and Function

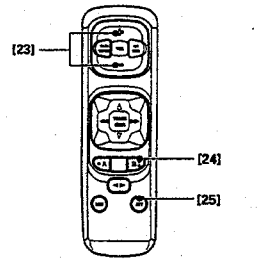


Fig. 23

[23] Volume buttons
Press the (+) side to increase volume and the (–) side to decrease volume.

[24] DSP button

In the network adjustment mode:
Used to select the filter to be adjusted. Each time the button is pressed, the selected filter changes in the sequence of LOW → MID1 → MID2 → HIGH → LOW ... in the PRO mode and F → R → SW → F ... in the STD mode.

In the equalizer adjustment mode:
Used to recall factory preset equalizer curve. Each time the button is pressed, the selected factory preset equalizer curve changes in the sequence of ROCK → POP → JAZZ → VOCAL → SOFT → FLAT → ROCK....

In the sound field control mode:
Used to recall the sound filed program. Each time the button is pressed, the sound field program changes in the sequence of STUDIO → JAZZ → HALL → STADIUM → CLUB → SFC OFF → STUDIO ....

[25] Attenuator button
Press to reduce the volume to 1/10 of its current setting ("ATT" is displayed in the operation display [15].)
Pressing again returns the volume to its original level.

- This function is available using the remote controller unit only.